## 1126-57-77

Hugh N Howards\* (wakeknot@yahoo.com), Department of Mathematics, Wake Forest University, Winston Salem, NC 27109, and Erica Flapan, Department of Mathematics, Pomona College, Claremont, CA 91711. Intrinsic Chirality.

We will survey results from a paper of Erica Flapan and Hugh Howards on intrinsic chirality of graphs. The main result of the paper is that for every closed, connected, orientable, irreducible 3-manifold M, there is an integer  $n_M$  such that if  $\gamma$  is a graph with no involution and a 3-connected minor  $\lambda$  with genus $(\lambda) > n_M$ , then every embedding of  $\gamma$  in M is chiral. By contrast, the paper also proves that for every graph  $\gamma$ , there are infinitely many closed, connected, orientable, irreducible 3-manifolds M such that some embedding of  $\gamma$  in M is pointwise fixed by an orientation reversing involution of M. (Received January 03, 2017)